

What is claimed is:

1. A fuse module for supplying a power from a common power supply to a plurality of power input sections of a circuit assembly through respective fuse elements, comprising:
  - a branch-connection conductor having an input terminal adapted to be connected to said power supply, and a plurality of fuse-connection terminals disposed correspondingly to said respective power input sections;
  - a plurality of power-input conductors adapted to be electrically connected to a corresponding one of said power input sections, and each having a fuse-connection terminal disposed in a pair with a corresponding one of the fuse-connection terminals of said branch-connection conductor; and
  - an insulation housing holding said branch-connection conductor and said power-input conductor, said insulation housing being formed with a plurality of fuse-installation portions for allowing said respective fuse elements to be detachably installed therein in such a manner that each of said fuse elements is connected to the fuse-connection terminal of said branch-connection conductor and the corresponding fuse-connection terminal of said power-input conductor to be interposed between said fuse-connection terminals of the each pair.
2. The fuse module as defined in claim 1, wherein said circuit assembly has a plurality of bus bars including a plurality of input bus bars corresponding to said power input sections, said bus bars being arranged to form a power circuit, wherein each of said input bus bars has an end which is formed with said fuse-connection terminal and held in said insulation housing to serve as said power-input conductor.
3. The fuse module as defined in claim 1, wherein each of said power-input conductors has an electric-connection portion protruding outside said insulation housing to be electrically connected to a corresponding one of the power input sections of said circuit assembly.
4. The fuse module as defined in claim 3, wherein said circuit assembly has a plurality of bus

bars including a plurality of input bus bars corresponding to said power input sections, said bus bars being arranged to form a power circuit, wherein each of said power-input conductors is provided with a press-fit portion as the electric-connection portion, the press-fit portion adapted to be press-fitted into a through-hole formed in a corresponding one of said input bus bars to be electrically connected to said input bus bar.

5. The fuse module as defined in either one of claims 1 to 4, wherein said plurality of fuse-installation portions formed in said insulation housing are arranged along a direction orthogonal to an aligning direction of said fuse-connection terminals of the pair in each of said fuse-installation portions, and said branch-connection conductor extends along an direction in which said pairs of the fuse-connection terminals are arranged.

6. The fuse module as defined in either one of claims 1 to 5, which includes a power-connection conductor having a fuse-connection terminal, and an input terminal adapted to be connected to an additional power supply other than said power supply to be connected to the input terminal of said branch-connection conductor, wherein:

a specific one of said power-input conductors is associated with said power-connection conductor and adapted to be electrically connected to a specific one of said power input sections, said specific power-input conductor having an end formed with a fuse-connection terminal; and

said insulation housing holds said power-connection conductor and said specific power-input conductor, said insulation housing being formed with a fuse-installation portion for allowing one of said fuse elements to be detachably installed therein in such a manner that said fuse element is connected to the fuse-connection terminal of said power-connection conductor and the fuse-connection terminal of said specific power-input conductor, and interposed between said two fuse-connection terminals.

7. The fuse module as defined in claim 6, wherein said branch-connection conductor and said power-connection conductor are disposed such that the fuse-connection terminals formed in said branch-connection conductor and the fuse-connection terminal formed in said power-connection

conductor are aligned approximately in a line.

8. The fuse module as defined in either one of claims 1 to 7, which includes:

an output conductor adapted to be connected to a power output section provided in said circuit assembly, said output conductor having an end formed with a fuse-connection terminal;

an external-output conductor having a fuse-connection terminal, and an external-output terminal adapted to be connected to an external circuit, wherein;

said insulation housing holds said output conductor and said external-output conductor, said insulation housing being formed with a fuse-installation portion for allowing one of said fuse elements to be detachably installed therein in such a manner that said fuse element is connected to the fuse-connection terminal of said output conductor and the fuse-connection terminal of said corresponding external-output conductor to be interposed between said two fuse-connection terminals.

9. The fuse module as defined in claim 8, wherein said circuit assembly has a plurality of bus bars including an output bus bar corresponding to said power output section, said bus bars being arranged to form a power circuit, wherein said output bus bar has an end which is formed with said fuse-connection terminal and held within said insulation housing to serve as said power-output conductor.

10. The fuse module as defined in claim 8, wherein said power-output conductor has an electric-connection portion protruding outside said insulation housing to be electrically connected to the power output section of said circuit assembly.

11. The fuse module as defined in either one of claims 1 to 10, wherein said branch-connection conductor includes a direct-connection portion adapted to be electrically connected directly to a specific one of said power input sections in said circuit assembly without interposition of said fuse element.

12. The fuse module as defined in claim 11, wherein said branch-connection conductor includes an inter-terminal portion extending in a direction parallel to an arranging direction of said fuse-installation portions in said insulation housing so as to pass through between said fuse-connection terminals of said pair disposed at a specific one of said fuse-installation portions of said insulation housing, wherein said direct-connection portion extends from said inter-terminal portion toward said specific power input section.
13. A fuse module-equipped circuit assembly comprising the fuse module as defined in either one of claims 1 to 12, and a circuit assembly having a plurality of power input sections, wherein each of the power-input conductors of said fuse module is electrically connected to a corresponding one of said power input sections.
14. The fuse module-equipped circuit assembly as defined in claim 13, wherein said circuit assembly includes a current-detection bus bar provided with an input terminal and an output terminal between which a detection-target current is allowed to flow, at least one of said input and output terminals being held in said insulation housing.
15. The fuse module-equipped circuit assembly as defined in claim 14, wherein said insulation housing holds the output terminal of said current-detection bus bar and the input terminal of said branch-connection conductor in a state that the output terminal and the input terminal are superimposed on each other.
16. A fuse-module mounting structure for mounting the fuse module as defined in either one of claims 1 to 15, to a vehicle, wherein the input terminal of said branch-connection conductor is fixed to a vehicle-mounted device or a vehicle body, while superimposed on a circuit-connection bus bar for connecting a power supply connected to said input terminal to another vehicle-mounted circuit.